

A-01106-000527

Project Status Report

Project: Elevated Water Quality Measurements at RFCA
Monitoring Locations in Walnut Creek

Contact(s): John Law (Bldg T893A; ext. 4842)
Keith Motyl (Bldg T893A, ext. 2172)
RMRS ER/Water Mgt & Treatment

Report Date: September 29, 1997

Status Frequency: Weekly

#	Project Activity	Sched Start	Sched. Finish	Status	Comment
<i>Actions/Tasks</i>					
1	Verify laboratory results and 30-day average calculations for the recent (May-June 1997) GS03 water quality measurements	8/14/97	8/15/97	Completed	Verified laboratory results, re-checked 30-day average calculations. Lab results pass QA/QC, details are published in <i>Plan</i> Report #1 to be delivered on 9/30/97
2	Perform "walk down" of stream channel and adjacent areas between Pond A-4 and GS03 looking for any unusual conditions which might indicate new sources	8/15/97	8/15/97	Completed	Observed no unusual conditions in Walnut Creek that would indicate a localized source area, several minor stream bank cuts and stream bottom fill locations were noted. Details are published in <i>Plan</i> Report #1 to be delivered on 9/30/97
3	Confirm that water quality measurements at GS03 have returned to normal levels	8/14/97	NA	Waiting on results	Five (5) carboys have been collected at GS03 and have been submitted for analysis Carboy for period beginning 8/5/97 had Pu/Am of 0.002 pCi/l. Still waiting on results for carboys which initiated sampling on 8/8, 8/29, 9/1, and 9/4. The current GS03 carboy has been collecting baseflow samples since 9/9/97
4	Re-analyze remaining sample aliquots for two of three elevated composite samples from GS03	8/14/97	8/21/97	Completed	One result confirmed original measurement, other sample failed re-analysis

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5	Perform appropriate notifications to Site personnel and Stakeholders regarding elevated (May-June 1997) measurements at GS03	8/15/97	8/15/97	Completed	Site and Stakeholders were notified Call downs included both Occurrence Reporting and RFCA reporting contacts Occurrence report filed 8/15/97 Regulators notified through RFFO on 8/15/97

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6	Perform sediment sampling in Walnut Creek upgradient drainages tributary to GS03	8/21/97	8/21/97	Completed	Prepared Sampling & Analysis Plan Collected 3 pond bottom samples from pond at Walnut and Indiana, collected 16 samples from streambeds upgradient, preliminary results were submitted for validation on 9/17/97, results and evaluation will be published in <i>Plan Report #2</i> to be published on 11/17/97
7	Perform additional sediment and soil sampling upgradient of GS03	Approx 9/15/97	Approx 9/30/97	Pending validated results of initial sediment sampling	Addendum to Sampling and Analysis Plan being prepared Additional samples will be collected to clarify or complement results of earlier sampling Sampling and Analysis Plan to be released as a controlled document. Completed, validated data were received on 9/23/97
8a	Accelerate appropriate analyses to ensure timely data availability	8/21/97	9/5/97	Completed	Accelerate sample turnaround to maximize data availability for decision making
8b	Perform value engineering analysis to support acceleration of compliance monitoring	9/6/97	9/30/97	Completed	Evaluate laboratory costs, turn-around times, and data quality Collect and compare costs of accelerated analytical turnaround Per K-H, all GS03 samples through end of FY97 will be expedited for two (2) week turn-around Expected that turn-around will continue into FY98 for GS03

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#	Project Activity	Sched Start	Sched Finish	Status	Comment
9a	Perform laboratory services check	8/21/97	9/15/97	Completed	QC samples are routinely collected according to RFCA technical design document (every 20 th sample)
9b	Submit additional sample duplicates, splits, rinseates, and blinds	9/15/97	11/15/97	Ongoing	This continues as designed K-H has requested all POC's data be validated Cost is not yet determined on expected turn-around
10a	Compile all existing water, soil, and sediment radio-analytical results for GS03 and associated upgradient locations	8/21/97	9/15/97	Completed	The need for additional QC sampling is under evaluation Analytical results were derived from RFEDS and submitted to GIS for posting to review data in map view
10b	Verify all existing water, soil, and sediment radio-analytical results for GS03 and associated upgradient locations	9/15/97	9/30/97	Completed for GS03	Draft map of sediment and soils prepared and under review Summary and analysis to be published in Plan Report # 1 on 9/30/97 Initial draft map will be used to refine the mapping process and produce a final map for the source evaluation study Summary and analysis are published in Plan Report # 1 to be delivered on 9/30/97

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11	Perform loading and fate and transport analyses Evaluate statistical correlations using water-quality, flow, and precipitation	8/21/97	9/30/97	Completed for GS03	Evaluation is ongoing to aid in the definition of near-term activities, results and hypotheses will be made available as they are developed Hydrologic, precipitation, and WQ results are evaluated for trends and correlations Careful consideration was given to the difference in results and hypotheses, interim results and evaluation are published in <i>Plan</i> Report #1 to be delivered on 9/30/97
12	Perform synoptic sampling event in Walnut Creek for the first 24-hours of the upcoming Pond A-4 discharge	8/25/97	8/30/97	Completed	This event monitoring utilized seven (7) automated samplers to collect time-paced composite samples for the first day of Pond A-4 discharge (8/29 - 8/30/97), effectively sampling the same (initial) 'plug' of water as it moves through the Walnut Creek drainage The samplers performed flawlessly with each composite sample receiving the targeted 75 grabs Grab samples for TOC and DOC were also taken on the rising limb of the discharge as an indicator parameter to define potential correlations Accelerated WQ results will be used to evaluate for water-quality trends (results may be returned as soon as 9/19/97) Results and associated evaluation should be available for inclusion in <i>Plan</i> Report #2 on 11/17/97

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13a	Install additional monitoring stations upstream of GS03	8/25/97	9/15/97	Completed 2 of 3 GS34 will be installed the week of 9/29/97	New gaging station locations selected and readiness approvals being received for installation Locations will collect continuous flow-paced samples to assess transport in No Name Gulch, McKay Ditch, and Walnut Creek Ecological approvals completed 8/27/97, soil disturbance approvals completed Gaging station GS33, on No Name Gulch at Walnut Creek, was installed 9/10/97 Gaging station GS35, on McKay Ditch at Walnut Creek, was installed 9/12/97 Startup and operation will take place on 9/15/97 for both locations Gaging station GS34, on Walnut Creek upstream of McKay Ditch, will be installed the week of 9/29/97 Results and evaluation will be published as they are received
13b	Install additional monitoring stations upstream of GS03 if needed to provide increased resolution	9/30/97	12/31/97	Ongoing	Information derived from the new gaging stations will be used to determine whether additional locations are needed
14a	Examine impact of RFCA watershed improvements on downstream WQ	9/30/97	12/31/97	Ongoing	Watershed improvements were performed in FY96 and FY97 WQ results are being compiled and analyzed to provide information on contaminant transport. Information will be published in <i>Plan</i> Report #3 on 12/31/97

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14b	Review historical release report(s) for possible correlation with RFCA monitoring results	9/8/97	9/30/97	Completed	Historical releases for the Walnut Creek drainage will be reviewed to determine whether past releases may have contributed to the elevated Pu and Am measurements. Results are published in <i>Plan</i> Report #1 to be delivered 9/30/97
15	Evaluate all Site activities potentially impacting GS03 water quality	8/21/97	9/30/97	Completed for GS03	Results and evaluation are published in <i>Plan</i> Report #1 to be delivered on 9/30/97
16	Perform additional walkdowns to assess No Name Gulch and McKay Bypass ditch sub-drainages and to identify origin of baseflow	8/20/97	8/20/97	Completed	Drainages show indication of recent high flow rates (likely from large storm events in first weeks of Aug 97). Baseflow was confirmed exiting pond at GS03 with no inflow noted. No indication of current baseflow from seeps or springs; no unusual conditions which may visually indicate a localized source area. Details are published in <i>Plan</i> Report #1 to be delivered on 9/30/97
17a	Identify data gaps and uncertainties in monitoring approach and protocols to improve monitoring program	8/18/97	9/30/97	Completed	Initial evaluation of pacing and baseflow sample collection frequency and developed change to sampling protocols that minimizes chances of low-volume samples. Findings and protocol changes are published in <i>Plan</i> Report #1 to be delivered on 9/30/97
17b	Continue to identify data gaps and uncertainties in monitoring approach and protocols to improve monitoring program	9/30/97	12/31/97	Ongoing	Detailed evaluation of pacing and baseflow sample collection frequency and developed change to sampling protocols that minimizes chances of low-volume samples

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18	Share recent developments and information with the K-H Team's Actinide Migration investigators and solicit additional source evaluation hypotheses	8/29/97	9/15/97	Completed	RMRS completed data exchange and consultation with Dr Bruce Honeyman (CSM) on August 29 th . Meeting minutes are being compiled and recommendations incorporated into the Plan for Source Evaluation and Preliminary Actions for Walnut Water-Quality Results. Extra sediment was set aside (from that collected on 8/21/97) to allow for independent evaluation by Actinide Migration investigators.
19	Evaluate ground water data for wells in the vicinity of GS03	8/21/97	9/30/97	Completed	Preliminary trending of Site-boundary well near GS03 (Well # 41691) shows GW Pu levels diminishing from approx 1.5 pCi/L to < 0.05 pCi/L between 1992 and 1997. Three additional wells were installed using improved drilling methods and these wells have subsequently showed no elevated Pu or Am. Results and associated evaluation are included in Plan Report #1 to be delivered on 9/30/97.

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20	Complete and provide draft of RFCA-required <i>Plan for Source Evaluation and Preliminary Mitigating Actions for Walnut Creek Water-Quality Results ("Plan")</i>	6/17/97	7/17/97	Completed	Delivered draft <i>Plan</i> to regulators 7/17/97, comments on <i>Plan</i> from regulators received 8/5/97 and 8/7/97 Response to comments sent to DOE 8/27/97 for transmittal to regulators May-June 1997 water-quality results from GS03 will be addressed in latest revision of <i>Plan</i> <i>Plan</i> will be amended to perform source evaluations for Walnut Creek basin above GS03 and GS10
21	Complete <i>Final Plan for Source Evaluation and Preliminary Mitigating Actions for Walnut Creek Water-Quality Results</i>	8/5/97	9/15/97	Completed	Provide draft for internal K-H Team on 9/10/97, transmittal to DOE 9/12/97, and transmittal to regulators on 9/15/97
22	Complete Report #1 for the <i>Plan</i>	8/21/97	9/30/97	Completed Scheduled for delivery on 9/30/97	Report #1 will include analysis and evaluation of historic reports and readily available information and environmental data for GS03 and preliminary analysis for GS10 Initial conclusions regarding source will be formulated and incorporated in this report Analysis of data received after 9/15/97 will not be included in this report

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23	Complete Report #2 for the Plan	10/1/97	11/17/97	Pending	Report #2 will include analysis and evaluation of existing GS10 and GS03 and the newly acquired GS03 information and environmental data, with need determined by the Phase 1 activities. Report #2 will include a preliminary assessment of SW093. Conclusions regarding GS10 and GS03 sources will be refined after inclusion of the new data and incorporated in this report.
24	Complete Report #3 for the Plan	9/30/97	12/31/97	Pending	Report #3 will include analysis and evaluation of all GS10, GS03, and SW093 investigative information and environmental data. Conclusions will be finalized and incorporated in this report.
25	Complete Final Evaluation Report and Mitigating Action Plan addressing elevated Walnut Creek sources	1/1/98	4/15/98	Pending	The Final Evaluation Report will include the results and conclusions of the source evaluation actions. The Mitigating Action Plan will evaluate options (cost, efficacy, etc.) and identify alternatives for effectively removing and/or reducing impacts of identified sources.